Deskripsi :

Easy Station

ES

A NEW Classic

- Fast & Powerful Reflectorless EDM
- LongLink Data Communication*
- Advanced Angle Accuracy
- The Longest Battery Life - 36 Hours!
- Rugged and User-friendly Design

* Option

User registration before use **Before using the ES series, it is necessary to perform the user registration.**
Please click here and read the registration manual.

Fast and Powerful Reflectorless EDM

- Fast and accurate pinpointing with phase shift technology.
- Fast distance measurement of 0.9s regardless of object.
- Minimum reflectorless measurment distance - just 30cm.
- Improved collimation with super-bright laser pointer.
- Smaller EDM beam spot size for minimal distance measuring error.
- Dependable measurement even at shallow incidence angles.
- Ensures accurate reflective sheet distance measurement.

The ultra-narrow EDM beam can precisely measure walls, corners, manholes on the surface, even chain-link fences and tree branches.

LongLink Data Communication*

- *Bluetooth*® Class1 realizes long distance and stable connection
- Link between total station and rover-end data collector, both equipped with Bluetooth Class1, facilitates quick surveying only by sighting the object.

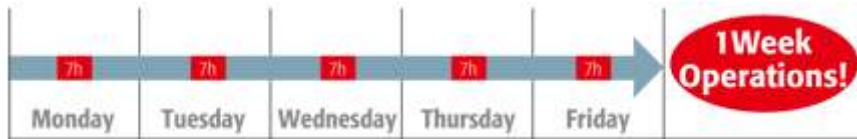
* Option

Advanced Angle Measurement System

- ES features advanced absolute encoders for long-term reliability in all work conditions. Dual-axis compensation ensures accurate leveling even on rough terrain.
- Motion clamp and tangent screw ensure stable angle measurement.
- ES-101 and ES-102 feature angle measuring accuracy of 1” equipped with groundbreaking technology for extremely reliable angle measurement.

The Longest Battery Life - 36 Hours!*

- Just one battery last 36 hours. It runs one week in full charge and no longer requires extra batteries.

* As of February, 2013.

7 hours in 5 days for fine single measurement in 30 seconds

Rugged and User-friendly Design

- IP66 dustproof/waterproof performance
- Standard usage temperature range -20ºC to +60ºC. Low temperature models can be used in range -30° to +50°C.*

* Low temperature models are available as options.

- USB Type A port for convenient added memory. Use of included USB accessory assures IP66 protection.

- Star key [★] instantly brings up functions.

- Control panel consists of 10-key pad with alphabet entry with LCD for easy viewing of graphics*.

* Control panel location may vary depending on region or model.

- Trigger key lets you take a series of measurements without taking your eye off the telescope.
- Trigger key is ergonomically placed so that measurement can be taken at any time with just the push of a button.

- Green/Red Guide Light is built into the telescope as a standard feature, enhancing setting-out work efficiency in a range of 1.3 to 150m.
- Built-in laser plummet is equipped for quick instrument setting.
  5 brightness levels are ready for optimum visibility.*

* Option.

Specifications

Model		ES-101	ES-102	ES-103	ES-105	ES-107
Telescope						
Magnification / Resolving power		30x / 2.5"				
Others		Length: 171mm (6.7in.), Objective aperture: 45mm (1.8in.) (48mm (1.9in.) for EDM), Image: Erect, Field of view: 1°30' (26m/1,000m), Minimum focus: 1.3m (4.3ft.), Reticle illumination: 5 brightness levels				
Angle measurement			1" / 5"			
Display resolution		0.5" / 1" (0.0001 / 0.0002gon, 0.002 / 0.005mil)	1" / 5" (0.0002 / 0.001gon, 0.005 / 0.02mil)			
Accuracy (ISO 17123-3:2001)		1"	2"	3"	5"	7"
Dual-axis compensator / Collimation compensation		Dual-axis liquid tilt sensor, working range: ±6' (±111mgon) / Collimation compensation available				
Distance measurement						
Laser output *1		Reflectorless mode: Class 3R / Prism/sheet mode: Class 1				
Measuring range (under average conditions *2)	Reflectorless *3	0.3 to 500m(1.0 to 1,640ft.)				
	Reflective sheet *4 *5	RS90N-K: 1.3 to 500m (4.3 to 1,640ft.), RS50N-K: 1.3 to 300m (4.3 to 980ft.), RS10N-K: 1.3 to 100m (4.3 to 320ft.)				
	Mini prisms	1.3 to 500m (1,640ft.)				
	One prism	1.3 to 4,000m (4.3 to 13,120ft.) / Under good conditions *6: 1.3 to 5,000m (16,400ft.)				
	Three prisms	to 5,000m (16,400ft.) / Under good conditions *6: to 6,000m (19,680ft.)				
Display resolution		Fine/Rapid: 0.001m / 0.01ft. / 1/8in. Tracking: 0.01m / 0.1ft. / 1/2in.				
Accuracy *2 (ISO 17123-4:2001) (D=measuring distance in mm)	Reflectorless *3	(3 + 2ppm x D) mm *7				
	Reflective sheet *4	(3 + 2ppm x D) mm				
	AP/CP prism	(2 + 2ppm x D) mm				
Measuring time *8		Fine: 0.9s (initial 1.7s), Rapid: 0.7s (initial 1.4s), Tracking: 0.3s (initial 1.4s)				
Interface and Data management						
Display / Keyboard		Graphic LCD, 192 x 80 dots, backlight, contrast adjustment / Alphanumeric keyboard / 25 keys with backlight				
Control panel location *9		On both faces				On one face
Trigger key		On right instrument support				
Data storage	Internal memory	Approx. 10,000 points				
	Plug-in memory device	USB flash memory (max. 8GB)				
Interface		Serial RS-232C, USB2.0 (Type A, for USB flash memory)				
Bluetooth modem (option) *10		Bluetooth Class 1, Ver.2.1+EDR, Operating range: up to 300m (980ft.) *11				
General						
Laser-pointer *12		Coaxial red laser using EDM beam				
Guide light *12		Green LED (524nm) and Red LED (626nm), Operating range: 1.3 to 150m (4.3 to 490ft.)				
Levels	Graphic	6'(inner circle)				
	Circular level	10' / 2mm				
Optical plummet		Magnification: 3x, Minimum focus: 0.3m (11.8in.) from tribrach bottom				
Laser plummet (option)		Red laser diode (635nm±10nm), Beam accuracy: ≦ 1.0mm@1.3m, Class 2 laser product				
Dust and water protection		IP66 (IEC 60529:2001)				
Operating temperature *13		-20 to +60°C (-4 to +140°F)				
Size with handle *9		Control panel on both faces: W191 x D181 x H348mm (W7.5 x D7.1 x H13.7in.) Control panel on one face: W191 x D174 x H348mm (W7.5 x D6.9 x H13.7in.)				
Weight with battery & tribrach		Approx. 5.6kg (12.3 lb.)				
Power supply						
Battery	BDC70 detachable battery	Li-ion rechargeable battery				
Operating time (20°C)	BDC70	Approx. 36 hours (single distance measurement every 30 seconds)				
	External battery (option)*14	BT-73Q: approx. 89 hours (single distance measurement every 30 seconds)				

*1 IEC60825-1:Ed.2.0:2007/ FDA CDRH 21 CFR Part 1040.10 and 11

*2 Average conditions: Slight haze, visibility about 20km (12 miles), sunny periods, weak scintillation.
With Kodak Gray Card White Side (90% reflective). When brightness on measured surface is 30,000 lx. or less.

*3 Reflectorless range/accuracy may vary according to measuring objects, observation situations and environmental conditions.

*4 When the measuring beam's incidence angle is within 30° in relation to the reflective sheet target.

*5 Measuring range in temperatures of -30 to -20°C (-22 to -4°F) with Low Temperature models and 50 to 60°C (122 to 140°F): RS90N-K: 1.3 to